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XI.—*Journey of Exploration to the Mouth of the River Limpopo.*—By ST. VINCENT W. ERSKINE.

*Read, June 14, 1869.*

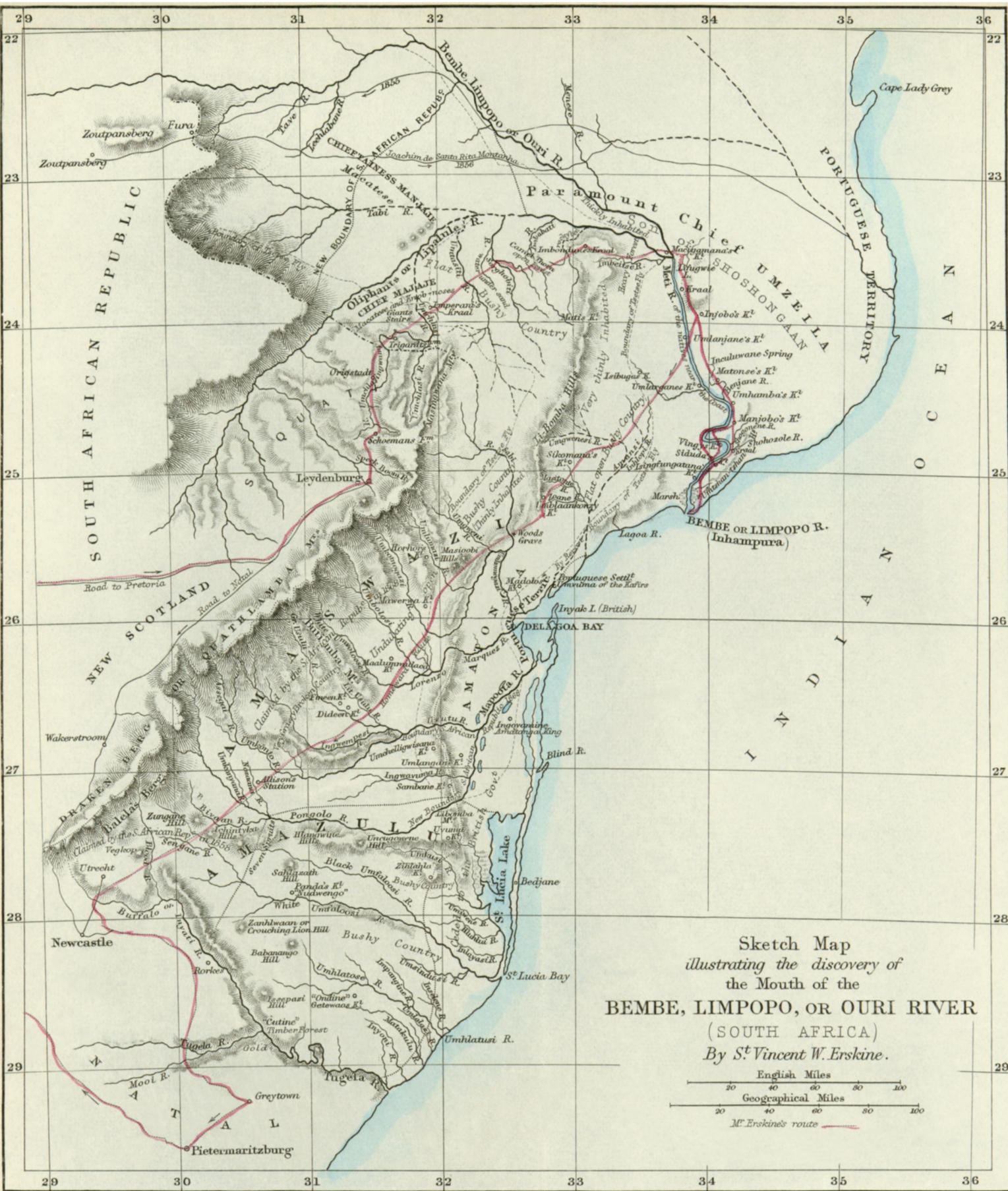
IT was in the month of March, 1868, whilst serving some 100 miles from Pietermaritzburg, Natal, that I heard it was contemplated by Herr Mauch, the explorer, who was then there, to undertake a journey of exploration through the heart of Africa, from south to north. He was in want of a companion, and gladly accepted my proposal to accompany him. On reconsidering my plans, however, I came to the conclusion that it would not answer to desert my profession as Civil Servant of the Government, even in the pursuit of science or of fame; I therefore proposed only to accompany my friend as far as the Zambesi, and to return coastwise, exploring the Sabia and Limpopo rivers, &c., accomplishing as much in eighteen months (the extent of my leave) as I found practicable.

In pursuance of this plan, I left the city of Pietermaritzburg in a transport wagon bound for Potchefstroom, South African Republic, being unable to afford the hire of a wagon for myself, and thereby wasting a great deal of valuable time.

About the 6th May, 1868, "I got aboard," casting a lingering look at Pietermaritzburg from the surrounding heights, thinking of the mischiefs and mishaps, the perils and anxiety I should undergo before I again beheld those patches of red, blue, and black, peeping through the varied foliage.

After passing over some 120 miles of broken country, with high waving grass, and here and there a patch or two of Mimosa thorn, we ascended the Quathlamba, or Drakenbergen, and from the top looked down upon what seemed to be a flat country from that point of view, but which had appeared hilly and broken whilst ascending. This was the farewell look on Natal, the scene of many pleasant hours—a place where men grow "samples" derisively spoken of by its detractors, but where, nevertheless, some 100,000*l.* worth of sugar is annually exported seawards, and perhaps 10,000*l.* worth landwards; where also the growth of coffee already amounts to 200 or 300 tons per annum, and where the productions are such as are common both to the temperate and torrid zones.

On this range, or step, runs the boundary between the colony of Natal and the Orange Free State, a boundary made by nature as well as man, for on this high table-land, some 5000 feet above the sea, the topography and verdure seem to alter by common consent, the mountains taking most peculiar and fantastic shapes, and the grass changing from the rank



luxuriance seen in Natal to the short thick grass of a colder clime. There the ant-bear no longer sets traps for the horseman by digging enormous holes fit to swallow a jackass; nor do abrupt hill and dale forbid long gallops after countless herds of antelope of every description, so famous in Natural History, which abound on these immense undulating plains, perishing miserably in thousands in the occasional snows that fall in winter, and whitening the ground with heaps of bones.

After passing along the ridge and crossing the Wilge River, a tributary of the Orange River, the traveller skirts a long range of table mountain, and reaches Harrismith, a district town in the Orange Free State, consisting of some 60 or 70 houses, and, I suppose, some 200 inhabitants.

On leaving Harrismith, you still continue passing over the rather dreary flats, generally burnt at this time of year, and again see numerous herds of game, now moderately fat. A few months later they will be reduced to skeletons, and many will die of starvation and scab combined; and especially of a very virulent form of scab called "fire sickness" by the Dutch; this sickness also affects cattle more especially on those farms where this species of game is plentiful. It is supposed to be incurable in both.

This is a good sheep country on the whole, but the sheep suffer from want of food in the winter, even when the grass is unburnt, as it has no sap or nourishment, and is like just so much tinder. Sheep that are constantly kept on it nevertheless thrive, and after a few years so improve the farm, that double, or even treble the number can run on it; and cattle also thrive exceedingly well, but are subject to various diseases—"lung sickness," "bush sickness," "geel sicthe,"—and others, which considerably reduce the profits on this class of farming. The want of a good or reliable market is much felt. The average price of good trek oxen in the nearest market, Natal, is about 4*l.* per head. After travelling four or five days, I crossed the Vaal River (the boundary between the Orange Free State and the South African Republic), and soon afterwards arrived at Potchefstroom, the largest town in the Republic. The country alters slightly on approaching the town; the undulating flats give place to small heights forming precipitous and stony banks to the streams, and here and there patches of mimosa appear. The town contains about 1500 inhabitants, and is well watered and planted with trees. Good wheat is grown around the township, and yields from 16 to 27 bushels to the acre. This wheat is grown in winter by irrigation, and in a rich red soil, which is prevalent in the country. The site is in every way adapted for a large town. The surrounding

country is slightly undulating, with a view of the Maluti Mountains, covered with snow, in the far distance to the eastward. Most luckily, I hit on an open wagon just starting for Pretoria. I engaged a seat in it, transferred my baggage, and started at once. This journey occupied four days. The aspect of the country altering but little, the short grass gives place to a longer and more luxuriant growth, indicating an increase of warmth. The peculiar and remarkable spots, such as Wonder Fontein, where there is a cave of unknown extent, have been so often described, that I shall not weary the reader with descriptions. The hills become bolder and more stony, until at last the road, passing through a gorge, brings into sight Pretoria, the capital of the South African Republic, and the high ranges of the Magalies Berg and Witte Waters Rand in the background, which give a more imposing aspect to the few neatly whitewashed houses of the town. It contains about 800 inhabitants, mostly English, and is perhaps the most enjoyable and fertile district of the Trans-Vaal. Though Leydenburg is generally supposed to be most fruitful, it is also slightly unhealthy; I therefore give Pretoria the preference as a residence. It is on the highway from Zoutpansburg to Natal, and has a large trade in ivory and ostrich feathers. The post arrives from the Cape and Natal once a week. Pretoria is not so well planted with trees (a great desideratum in South Africa), nor is it of so much commercial importance as Potchefstroom, but doubtless in the race of prosperity it will outstrip its elder and larger sister. A rather amusing incident occurred here, showing the difficulties with which infant communities have to contend in such small matters even as the supply of writing materials. The Government wished to make a fresh issue of notes ("Blue-backs"), but were unable to obtain a ream of paper on which to print them. Their difficulties, however, have not been diminished since the paper has been found.

A few words regarding this State by a disinterested observer may not be amiss. I think it has every prospect of a reasonable success; but, owing to its distance from the seaport, it will never become a great State, though its productions of wheat, sugar, and coffee, lead, copper, silver, gold, and magnetic ironstone, and its cattle and sheep, would seem to point out a path to prosperity, could the district be rendered more accessible.

If in possession of a strong government, a road or rail would be opened up from Leydenburg down the Drakenberg, passing along somewhere near the Umbolosi River, in the Amaswazi country, down to Delagoa Bay, and from Zoutpansburg, down the Limpopo to its mouth, where boats doubtless might land,

and ship cargo in vessels lying out in the open roadstead. The former route is about 120 miles long, and the latter about 200. I stayed about three weeks in Pretoria (luckily with a friend, Mr. Lys, for the hotel is not habitable).

I was then kindly given a lift to Leydenburg by Mr. Lys, and, after a rather uninteresting "trek" of about 100 miles, varied occasionally by a beautiful waterfall, we arrived there. The town consists of about 10 houses, and some 30 inhabitants. An affluent of the Oliphant's, or Lipalule River, runs past the town and is called Dorp, or Town, River.

As this place possessed no hotel, we thought we should have to rough it in the wagon, but Mr. MacLachlan, formerly of Natal, offered us accommodation in his house, and for this Mr. Lys and myself were extremely grateful—the more so as it was an unexpected and unsought kindness; which indeed he did not cease to manifest after I left for the Limpopo: but more of that hereafter. In my progress through this State I was in open, grassy country all the way; but to the north and west the country is entirely wooded with the usual mimosa thorn. I stayed for about a week at Leydenburg, during which time I employed myself in taking observations and deciding with Mauch as to our contemplated trip. After some discussion, I decided to go alone down the Limpopo, as the duration of my leave of absence would prevent my accompanying him to Moselekase (Motsilikatsi), and if I could complete that trip in about two months, I should have time enough to go up the Limpopo to Zoutpansburg, and thence northwards, returning by Inhambane; but, as the sequel shows, "Man proposes but God disposes." So that, after definitely settling the latitude and longitude of Leydenburg ( $31^{\circ} 30' \text{ E.}$  and  $25^{\circ} 4' \text{ S.}$ ), I made a start, getting a lift in Mr. MacLachlan's wagon to Trigardt's farm, about two and a half days' trek from Leydenburg. Soon after leaving I crossed the Speck Boom River, an affluent of the Dorp River, referred to before, and the same evening outspanned at "Schoeman's Farm," on the sources of the Elands or Umchlasingwana River; afterwards the road passes through a deep gorge along the course of the river, crossing it several times. This valley and the surrounding mountains are bushy. It has numerous farms on it, and though, I should think, extremely hot in summer, it produces good wheat. The stream passes through the deserted town of Origstadt, through which we also passed. It was deserted because of its unhealthiness, the inhabitants having moved to Leydenburg. After passing along this picturesque valley we arrived at "Trigardt's Farm" (latitude  $24^{\circ} 2' \text{ S.}$ ). Being compelled to remain here until bearers could be sent for, I employed myself in shooting partridges and guinea-fowl. There are a few

eland and koodoo, besides small bucks, on the mountains ; but, having no horses, I only contemplated these precipices from afar. I made an effort to sketch this place, but unfortunately, being no draughtsman, failed signally, as the scenery is on that grand scale which requires a master hand to portray the varied shades of bushy hill and frowning precipice, coloured and tinted by shadows of fleeting clouds. After waiting a week or so, I managed to start, on the 13th July, 1868, having engaged eight Caffres besides the man Adam I brought from Natal. I engaged these for different articles ; some I paid three stretches of blue calico, others 1 lb. of blue beads, others six rings of brass wire, to go to Umzeila's, the paramount Chief of the Bembe or Limpopo country, whose usual residence is at the confluence of the two rivers, Oliphant's or Lipalule, and Bembe or Limpopo. A Caffre will not willingly carry more than 30 lbs. besides his own mats, &c., although I was told he would carry 60 lbs. and made my packages accordingly ; only 40 lb. packages should be made up ; it is the utmost a Caffre will freely take, though he will load himself with meat to double that amount when he gets a chance. I have often heard it said that these natives eat immense quantities of either meat or maize, considering the work they do. I did not find it so, as my own appetite was quite equal to theirs, and I lived on the same description of food.

After passing along the Umchlasingwana or Elands River, above referred to, and ascending some heights of about 1000 ft., sleeping that night and the next on the veldt, we reached the top of the Drakenberg on the 15th. Three days' journey would not have occupied more than one, if we had not been delayed by rain.

From this height, some 2000 feet above the plain, the view, as far as the horizon, is apparently one uninterrupted flat, covered sparsely with bush, with the Umchlasi River flowing along like a silver thread in the depths below. To the left may be seen a small range of koppies or semi-isolated hills, apparently gradually diminishing in height until lost in the horizon. This range is reported to be on the other or north side of the Lipalule River, and I should say about 30 miles in a bee-line from the spot where I stood. The Umchlasi River could be seen, almost until it approached these hills, in a north-westerly direction. The descent is very precipitous, through a crack in the immense red cliffs, which is roughened by a friendly stream to give foothold to the traveller, and nourishment to a few trees which extend their friendly arms to hand him down the giant stairs. In one or two places it is necessary to drop some 6 feet. There are two other passes through these moun-

tains; one is along the course of the Umchlasli River, but, owing to the difficulty of wading in water for about 4 miles, I took the above-mentioned one; the other is to the westward. After staying a few hours by the river, under a beautifully shady tree, I started for Imperani's Kraal, the first on the lower side of the Berg, and arrived there about seven in the evening. The country, as viewed from the heights, appears unusually flat, but, on descending the plain, it is found to be slightly undulating and sparsely bushed with different varieties of mimosa thorn and other similar trees. A stream, stagnant at this time of the year, passes the kraals. The water appeared bad and discoloured, but was not disagreeable to the taste. The surface-soil was coarse sand, the subsoil brown loam. Here and there rocks, composed of ironstone, crop out, and conglomerate. Several dry beds of streams were also crossed, all composed of coarse sand. I found food expensive here, owing to the failure of the crops at this season. Just at this point the natives are better off, but a little further back they are literally starving, and were most wretched objects to behold. Here I saw for the first time the so-called Knob-nosed Caffres. They mark their faces by pinching up the flesh in the shape of small knobs, about the size of peas, down the centre of the forehead and nose, and between the nostrils. The women have additional markings across the cheek-bones and along the upper lip. These people, as a tribe, are extinct, having amalgamated with the tribes of Manjaje and Umzeila. The rising generation are not marked. In a few years knob-noses will be as extinct as pig-tails.

The manners and customs of the Macatese, under Manjaje, are peculiar. This tribe is always governed by a chieftainess, who is not permitted to retain more than one child, and this must be a girl. Other children, when born, are destroyed. She does not marry, but chooses the fathers of her children indiscriminately from amongst her subjects, by whom she is held in great respect and reverence. Her territories extend from the south side of the Limpopo very nearly to its confluence with the Lipalule and along the former river to the Berg. Another Chief who owes allegiance to Umzeila, and is the master of this kraal, is called Manjaje, or Umjaje. His territory is undefinable. The tribe seems to be a constant prey to Umzeila, who destroys their gardens and impoverishes them in every way. They possess no cattle, or this Chief's visits would be more frequent. To give some idea of the value of food, I shall state what I paid for about one bushel of maize, namely, the value of about 10*d.*, for a fowl about 5*d.* in beads, or blue salem-pore (calico).

I find it an awful business to get under way. Up at 6 A.M.,

I have to see the Caffres cook their food myself; altogether it is three hours before they start, after being stirred up. I find myself stiff from the day-before-yesterday's hard work in descending the mountain. Here I saw the first "Tsetse fly," which answered exactly to that described by Chapman, very like the ordinary dark-grey horse-fly, not quite so large, with a long game appearance, barred across the abdomen with blackish stripes, the colour between which is lighter than the rest of the body; the wings, when closed, lay along the body, overlapping each other.

I saw some quaggas to-day, or rather Bonte quaggas, or zebras. A cool breeze from the E.S.E. I hired another bearer to carry food, as I should not pass near any kraals for some days. The Caffres have a few miserable cur dogs, which are not affected by the "fly;" they resemble jackalls, and are generally of a light-brown colour, with curled-up bushy tails; their coat is rather long and hairy. I find I get very tired towards the end of the day about the legs; but I suppose this will wear off with use.

I crossed what would be a river in summer, but what at present is a succession of pools, some two or three miles apart: water is to be had by digging a foot or so. A traveller, not knowing this, might come across such water and see only a waste of dazzling white sand, and perhaps perish for want of that which was a few inches under his feet. The country is of the same unvarying flatness, covered with seedy-looking "bush." The soil appears of much the same description—very poor, I should think. There are more outcroppings of rock than I have hitherto met with, mostly sandstone and conglomerate, sometimes quartz.

Passed the "Umtasiti" or "Umtaseera" River, the only running stream encountered since crossing the Umchlasli River. It is a fine stream, as clear as crystal, flowing over a sandy bed. On the northern side I found a reef of quartz, of a beautiful white colour, evidently of the same description as that in which Herr Mauch discovered gold on the "Shashi" River. I broke off several pieces, but in none of them was there visible to the naked eye any description of metal. The "bush" here is not large, principally mimosa of different kinds; some thornless trees may also be seen here and there. The bush is sufficiently thick to impede the view, but a horse could be ridden at full gallop through any part by avoiding the clumps. This bush is the huntsman's friend, affording him concealment in stalking his game, which otherwise would be difficult to procure, as you cannot hunt on horseback on account of the "fly;" and I may here remark that, to my mind, this destroys almost all the pleasure of sport. I would rather shoot a little ordinary game, such as hartebeeste, wildebeeste, and blesbok, mounted, than a

large quantity of big game, such as elephants, rhinoceros, sea-cow, giraffe, buffalo, &c., on foot.

I was generally somewhat in front of the bearers. On one occasion I passed a rather peculiar-looking dead stump, or very large ant-heap; being anxious to get to water that night I did not trouble myself much to examine it, but soon after passing it one of my Caffres came up and said, "Shoot, shoot!" pointing out this stump. I said it was only a stump, not lifting my eyes higher than the tops of the small trees, on account of the glare from the sun; but at that moment it seemed to move, and on looking upwards I caught the mild black eye of an enormous giraffe. My heart was in my mouth, I could not cock my gun fast enough; I threw it up and gave the animal the 10-bullet, backed by 6 drachms of powder, expecting a mighty downfall; but my first giraffe was not to be killed on this occasion. Water being far off, he was not followed. I saw a good many impalas and a variety of bush-pig, new to me. Those I have hitherto known are of two varieties—the "Vlat Vark" or "Flatt Wart hog," and the "Bush Vark" or "Bush pig," with grey bristles on the back. This little creature, about the size of a good half-grown domestic pig, was blue, and had few bristles on it. The country from here to the Sorgobiti River swarms with game, consisting of giraffe, eland, buffalo, koodoo, zebra, brindled gnu, zenondo or bustard, hartebeeste, pigs, and other kinds; I also saw here a large black pheasant or koran (*Floricor*), of a species I had never heard of or seen before. I saw a great deal of game, but it was wild, and I was tired and did not shoot much.

On coming to the Sorgobiti River the Caffres proposed that I should stop, though it was then only about 12 o'clock, on account of absence of water ahead. I had been so often deceived by this same cry, and knowing what liars they one and all are, I was inclined to push on; but seeing numerous buffalo and other spoor, I stayed for a day's shooting. About 2 o'clock P.M. I went on the spoor of some buffalo; but the men pointed out some 600 yards away the "dead tree" appearance of a giraffe, head and neck far above the bush. We deserted the buffalo spoor for the giraffe. After a good deal of stalking I got within 86 yards (afterwards measured) and fired. The Caffres cried, "He is hit!" I gave him the second barrel and followed the Caffres at full speed, charging my breech-loader on the run. Having gone about 500 or 600 yards I was blown, and stopped; but hearing the Caffres shout "He stands, he stands!" I ran on again and fired a shot ingeniously into a thick tree. Ran again some 600 or 700 yards, till I was blown. The Caffres again shouted "Come on, come on; he stands!" I walked this time and gave him another shot, loaded, and ran again. I stopped, being unable to keep

the quarry in view. The Caffre ran back, seized my gun, and said, "Run, run!" I did run in a sort of way, and at last espied the giraffe standing with his rump towards me, and gazing with his moist black eyes over his shoulder. My conscience gave a twinge at killing such an animal; but bang went the "10" and down he toppled, making the ground tremble beneath my feet. I gazed with delight, mingled with pity, at my first giraffe, and almost registered a vow that I would never kill another. The noble creature was 11 feet 3 inches from the top of his tail to the point of his shoulder, 11 feet 3 inches from the toe of his fore-foot to the top of his wither, 16 feet 5 inches from the toe of his fore-foot to the top of his horns; the length of his neck, from the top of his shoulder, was 7 feet 9½ inches; extreme length, from the tip of his tail to the tip of his nose, 19 feet; his head was about 3 feet long. I went out the next day and tried for buffaloes, but was unsuccessful, though the spoor was fresh. I saw many giraffe, partridges, and pheasants. When game is killed, it is difficult to induce Caffres to leave the meat; I therefore determined that, as I had neither time nor goods to waste, I would shoot no more, and seldom went out after this, although I saw much game, including sea-cows, in both the Lipalule and Limpopo rivers.

The natives about here suffer from drought, and would frequently starve were it not for bountiful Nature, which gives them the "Temongo," a red fruit, the size of a small apricot, growing on a large tree of the Caffre fig species; the stone of which, on being broken, shows two kernels of about three-quarters of an inch long and one-eighth thick; they have little taste, but are very oily and good eating. The natives also procure the fruit of another tree, and pound it up in wooden mortars. It then has the appearance of dry pounded dates, and is called "Te-hawkwa," and has a sweet and rather disagreeable taste. I passed three or four water-holes on the way, the Caffres, as usual, having deceived me. We arrived at the banks of the Imbabati River, which, as is usual with these streams, had a few pools here and there, the rest of the bed being of dazzling sand, which, on being scraped away, exposed beautifully clear water.

We slept at some kraals deserted by the owners from fear of an attack from Umzeila's people. I saw these men hidden in temporary huts some distance back. As a rule, I generally slept in the open; but on this occasion slept in a hut, as it was chilly.

On starting in the morning, I crossed a stream of water running into the Imbabati River, which immediately lost itself in the sand. I crossed the above-mentioned river some time after starting, and after partaking of my lunch of cold giraffe

and hot water, we emerged in "open forest," a distinct thing from "open bush," and consisting of large trees, between the trunks of which you could see a great distance, the ground being entirely destitute of under-growth: the trunks are bare to the topmost branches. I saw some spoor of rhinoceros and lion here.

The appearance of the soil here alters considerably, being composed of a coarse gravel of disintegrated quartzose rock, with constant outcropping of rock very much mixed with mica. The country further on towards Imbondune's kraal (s. lat.  $23^{\circ} 29'$ ) has better soil and water, but it is all of the same unvarying flatness.

I here met with the "Zenondo," a scarce antelope called by the Dutch "Bastard Hartebeeste," though I failed to see any resemblance between it and the true one; in fact, it more resembled the "Blesbok," but without white on the belly and face. Its horns are small, and it is a very handsome animal, about the size of a donkey.

The country continues to improve, the trees are more scattered, and the grass grows higher and thicker. I here left the usual low plain and ascended a rise of about 100 feet, which appeared flat on the top. The country is thickly inhabited, and is well cultivated.

After proceeding some little distance, I came upon a spring, which the Caffres informed me was only allowed to be drunk out of by "inkosi" (chiefs), and that "abafokazan" (poor men) were killed if they drank of it. I was told to go to the Chief Imbondune, but preferred sleeping in the open away from kraals. He visited me about 4 o'clock, and wished me at once to go to his kraal, which I declined then. Next morning I went to visit him, and by a path made through impenetrable scrub for about 2 miles. I was then presented with some peculiar dry food, which he would not let me boil or cook in any way; it was something like meal, but had a taste as if some flavouring had been put in. I ate some, and was then presented with "tshuala," a kind of beer made from "sorghum." When good it is of a pink colour, with a strong disagreeable smell. It is slightly acid and very distasteful at first, but one gets soon fond of it. I drank a little of this.

I had presented this man, both on his first visit to me and on mine to him, with wire and beads, of at least six times the value of his present to me, but he begged for more. After eating his food I began to feel ill, and towards evening was extremely sick. I believe that I had been poisoned; of this I was more strongly convinced by his subsequent behaviour in refusing his people permission to sell food to me, and persuading four of my men

to desert, as well as from what I afterwards heard of him from Mr. Reeves, who had been here.

Hearing that Mr. Reeves was at no great distance from me, on the Lipalule River, I sent a messenger with a note, who returned next morning with an answer, and a little flour, coffee, pepper, and dried vegetables. The note from Mr. Reeves expressed his regret at his inability to accompany me, as his bearers refused to go. For his great kindness in sending me these supplies I beg here to be allowed to thank him. Taking the advice of an older traveller, I had provided myself with tea and salt only. On attempting to start, all my bearers refused, and Imbondune would not allow any of his men to go until I should give him a blanket. I did so, and he then said, "I have no power, I am only one of Umzeila's captains; this is the kraal of the First Captain of Umzeila, the Great Chief." After haggling for about a day, and getting six of my men to agree to go as far as the confluence of the two rivers Lipalule and Bembe, I left my Natal Caffre, Adam, in charge of my goods, and started, intending to send back for them. After getting on some 40 miles, I came upon a kraal, and engaged three Caffres there to return and bring on the things. The next day I got the first view of the Oliphant's or Lipalule River, which was bordered by highish ground on this (south) side, being the fall of the rise before mentioned. At 5 o'clock we made our bivouac on its bank, surrounded by herds of game, amongst which was the "tetla," or water buck; and now and then the deep bark of the hippopotamus, which are numerous in the river, boomed forth. I gazed on this stream with great delight: a lone white man, in an unexplored country, looking at a stream which I was to follow through hardships little dreamt of then.

I crossed next morning, the Caffres hallooing and beating the water to scare the crocodiles. The river was about 200 yards wide, and, at the point crossed, about up to the armpits in the deepest place. The stream is swift, now calm and deep and then shallow and rapid. The bed is sandy, and the banks densely wooded with large evergreen trees of sufficient size to make middling planks. After walking through thickly-inhabited and well-cultivated land, we came to a kraal; where I was requested to stop until the Chief was informed of my arrival. After waiting about an hour in the hot sun, I would wait no longer, and started by myself to see the junction of the streams, which was not far off. After leaving the kraal, and going about 3 miles, I saw, in the glory of a setting sun, "the meeting of the waters."

I encamped myself under a large tree on the banks of the Lipalule River amidst Indian corn, which blooms and ripens at all seasons of the year in this valley, the soil of which appeared

extremely rich. Every evening and morning immense flocks of green parrots used to perch on the trees, screeching and screaming, awaiting an opportunity for a swoop down into the corn, which was protected by Caffre boys hallooing and whistling with all their might to keep these pests from their crops. I hardly ever bought a head of maize that had not a great piece ploughed out by the parrots. It is noteworthy that this spot has never been known to fail of green maize.

As I should be obliged to wait some days for the arrival of the goods I had left behind, I had ample time to look about me. My Caffres having only engaged to come thus far with me, I paid them, and they returned. I was therefore left alone to gather firewood, cook, &c., and draw my own water, but I suffered little inconvenience, as food was good and cheap, and the Caffre boys occasionally brought firewood, for which I paid them beads. My food chiefly consisted of stamped, ground, and green boiled maize, sorghum, beans and ground-nuts, and occasionally fowls and fish, when I could purchase the latter.

At night, after the Caffres had gone, I endeavoured to get some observations by fire-light, as I had left my lamp behind. I obtained two or three observations for latitude and variation; but was not satisfied with my observations for longitude, though I succeeded pretty well with one or two; but after three or four nights of this sort of work, beginning about eleven and leaving off about one, I abandoned it. The sun and moon not being visible at the same moment necessitated the observations being taken by the moon and stars, and I am afraid the length of time consumed in taking each set, from my having to make up the fire after each observation, will prevent them from being of much exact value.

On the arrival of my things, some six days after my getting to this point, I determined to move across the River Bembe to where I should be less disturbed, and have the advantage of the shade of three "Imbangana" trees. The Imbangana is a most beautiful evergreen tree about 40 feet high, with leaves much the shape of a horse-chesnut, but of a dark shining green colour. Under a clump of two or three of these trees there is quite a "dim religious" shade, and the soil underneath is generally damp from want of light and air, as the branches on the outside approach the ground. I was informed by the natives living here that no Tsetse-fly exists within some distance of the banks of the river, and that at one time they possessed cattle, but the Amaswazi had so plundered and harassed them that they had ceased to keep any, so that their enemies should no longer be enticed down by hopes of booty. "Our ivory," they said, "we can hide, but our cattle we cannot."

On examining my goods I found that Adam, my servant, had helped himself to twenty or twenty-five pounds of beads, which I suppose he had been frightened into giving to the natives, as he was a most arrant coward, and used to cry like a child sometimes when he could not persuade me to turn back by tales of the murders which the natives lower down are said to have committed. This theft of beads afterwards caused me much loss of time, great anxiety and hardship, and, in fact, nearly cost me my life. I asked the Chief to supply me with men, accompanying the request with a present as usual; he replied that he would endeavour to accompany me himself to Manjobo's kraal, some two and a half days' walk down the river. As he said he could not start for four or five days I made the best of my time by taking observations, and found the confluence of the two rivers in latitude  $23^{\circ} 34'$  s., and longitude  $33^{\circ} 40'$  e., in round numbers. I could not obtain an observation with the sun, and only obtained two meridian altitudes for latitude, on account of the constantly clouded state of the sky, which generally was clear towards early morning and until ten or eleven o'clock, but, after that, bank after bank of clouds would blow up from seaward and completely obscure the sun.

I noticed during my journey that the prevailing winds were either from the south-east or north-west, the former damp and cold. The temperature of the water was  $64^{\circ}$  Fahr. The mean of several observations of the air in the shade gave at 9 A.M.  $73^{\circ}$ , at noon  $77^{\circ}$  to  $82^{\circ}$ , and at 3 o'clock P.M.  $88^{\circ}$ . Observed several times for variations of the compass on the route N.  $22^{\circ}$  W. and N.  $22^{\circ} 30'$  W., but having only a small Troughton and Simms' pocket prismatic compass, these cannot be relied on nearer than  $30'$ .

I caught some very curious fish, averaging about 3 lbs. each in weight and 18 inches in length. They are of a beautiful silvery colour with a brownish tinge on the back, marked longitudinally with blue stripes, not unlike a mackerel. Their fins and tails are tipped with red; they have a peculiar fleshy fin about half an inch square, placed between the back fin and the tail: their scales are large, of a square shape, and rub off with the greatest ease. But the mouth is the most wonderful part of them, the upper jaw having eight teeth about an eighth of an inch long, and projecting, so that when the mouth is closed they appear outside and overlapping the under jaw, which is perfectly toothless. I also bought from the natives two other kinds of fish, one of the *Silurus* species, very different from the ordinary *Silurus Glanis*, so common in Africa, both north and south, and the other a fish very similar to our ordinary English

bream, but of a darker colour. This latter species inhabits the muddy streams flowing into the river. The former kind, judging from the specimen I saw, and which I believe had not attained its full growth, being only about six inches long, is of a semi-transparent appearance, like a smelt, of a light brown colour, with a smooth skin and the ordinary feelers. It has also a small dorsal and two shoulder fins and the usual eel-like tail. The other fishes inhabiting this river are the *Silurus Glanis* and the common "scale-fish" of Natal. All the fish, with the exception of the latter, which is full of small bones, are very good eating.

A great many wild geese of two descriptions are to be seen wading about during the day, but in the morning and evening they quit the river-side to feed in the Caffre "gardens" on the banks.

The chief at last presented himself, with men, and we started towards the middle of the day. After leaving the river some four miles away, we skirted a long lake, called "Lifugwie," about  $1\frac{1}{2}$  mile long and 1000 yards broad, fringed with reeds, but presenting a fine open sheet of water in the centre, which is frequented by sea-cows, alligators, and fish innumerable. I believe the path thus far trends towards the kraal of Umzeila, the paramount Chief on the U'Sabia River, according to the natives some 15 days' walk northwards from this.

We soon after regained the bank of the river, passed along it for some 4 or 5 miles, and, much to my disgust, had to stop at a kraal which is situated on a rise of about 150 feet above the river and about 1000 yards from the bank. The surrounding country can be well surveyed from this slight elevation, and the Bembe be seen meandering its way in the distance until lost to view in the high trees along its banks, from the brighter verdure of which it may, however, be traced for some miles further. Next morning my men refused to go on, but with persuasion, threats, and the influence of their Chief, slight though it was, they were at last induced to start. The custom or law is to pay your bearers beforehand, so that you are completely at their mercy. That night, after a very hard walk, we arrived at "Injobo's" kraal, passing on the way through very thick bush. On our arrival I found a difficulty in getting food, but at last procured sufficient for that night. As usual, my blankets were put down under the nearest tree, of which two or three are generally left standing in each kraal, and I slept as only weary men can sleep. On awakening next morning what was my dismay to find that all my bearers had deserted, leaving me still two days' journey from "Manjobo's," the place agreed upon.

I had paid these men my last salem-pore and large blue beads, the remainder of my goods being almost worthless, consisting of five blankets and some 40 lbs. weight of small beads and files. I tried to hire men, but could not; and the owner of the kraal refused to take charge of my things, until on my saying at last that I would leave them whether he would or no, he agreed to keep them for a day or two until I could hire men to return for them. Luckily, my friend Macigamana had persuaded one man to stay, so that with the help of his two small sons, the man, and my own servant, I was enabled to carry my sextant, horizon, blanket, cooking-pot, and a few goods. That day we passed through a country where the bush began to get stunted and scattered, and slept at some kraals on the Benjane River, a small stagnant stream about 20 miles in length; and after crossing this two or three times, the next day I saw its embouchure into the Bembe, and soon afterwards arrived at Umhamba's kraal. The chief Macigamana stayed at a kraal (Matonse's) on the road, and did all in his power to persuade me to do likewise, but no persuasion would prevent my going on, so that, although my servant almost refused to accompany me until I used threats of dreadful violence, and notwithstanding that I could get no one to show me the way, I shouldered what goods I could, looked up Adam, and started; however, after walking about two hours, I employed a man whom I met to carry some of my burden and point out the road to Manjobo's, where we arrived about 5 o'clock P.M. I went down to the river and had a delicious bathe, bought some boiled maize for supper, and went to bed. Next morning Macigamana sent to ask me to wait for him, as he was coming. I employed the interval in taking observations for longitude and variations of the compass, as the day was a superb one with both sun and moon in view. About noon we started along the banks of the river, and after three hours' walk came to Manjobo's, passing on the way signs of old kraals, like "fairy rings," denoting that there had been at one time kraals at this spot, about half-way between the two kraals of Umhamba and Manjobo. I afterwards ascertained that these kraals were formerly the residence of the late Chief Shosonga, father of Manicose, whose place is laid down in Hall's map, but incorrectly.

Manjobo is the commander of the forces for this district. Umzeila, the Chief, being afraid that his precious life might be forfeited by such close proximity (as 250 miles) to the Amaswazi, has removed himself some sixteen days further off; and naturally his subjects here, at such a distance from the seat of government, display all the characteristics of the savage, who is only

kept under decent control by the immediate vicinity of a strong hand, and the fear of severe punishment. This Umzeila is not the rightful heir to the throne, but Mawerwa, his elder brother, who first succeeded his father, Shosonga. After some four or five years, however, the people got tired of the *mild* form of government he had adopted of killing all the men unfit, from age or otherwise, for going to battle, and the young ones naturally thought that on his not finding any more old he would begin on the young men, and as Umzeila had made one or two nearly successful attempts to dethrone Mawerwa, the nation invited him to accept the throne. After obstinate resistance, Mawerwa was deposed, and fled to the Amaswazi tribe, who rendered him assistance on three different occasions to regain his throne. On the third attempt so many perished from thirst and sickness, that the Amaswazi refused him any further aid, and he has since lived in the Amaswazi country, resigned to his fate. Since Umzeila has assumed the chieftainship there has been peace between the two tribes so far that the men of one do not venture to intrude on the territory of the other, and the country on their boundaries is depopulated for about four days' walk.

On my arrival at Manjobo's I heard that some white men were at the "Amanzi Inhlapi," or white water, and that they intended to come to the Bembe. After trying in vain for four days to persuade Manjobo to give me some men on hire to return for my things, I went back to find my friend Macigamana, and to induce some men to accompany me to Injobo's. I found him at Matonse's kraal. My servant Adam here complained of headache, and fearing it was due to fever, I allowed him to remain, and went some thirty miles up the river with four men to Injobo's. On my arrival there I heard that the white people had reached the Bembe and were some three hours' walk distant. Thinking it might be Mr. Sanderson, I determined to go to them. Having sent my things on, I started for Umlanjane's kraal, where these men were, and on my arrival found them to be Messrs. Wood, and Dubois brothers, from Natal. I was glad of this, as it went against the grain to have to share the discovery, which I felt certain that I should make, with any one, although I should have felt it my duty to do so. They kindly gave me the goods I wanted, and I started on my return. On my arrival at Matonse's, I found that Adam had not only paid the men double their allowance, but, as on the former occasion, had helped himself to goods and spent them unnecessarily, as I had paid for his food during my absence. This was beyond human endurance; I therefore thrashed him, and he ran away. As I was obliged to

be back at Umlanjane's within nine days from starting, I could not wait for his return, so gave directions that he should follow, and then started alone, as I could not hire any bearers, the chiefs being adverse to my proceeding. I shouldered waterproof sheet, goods, ammunition, gun, pistol, sextant, &c., and some honey I had purchased, about 45 lbs. weight in all, and started for Manjobo's. In three hours I reached Umhamba's, where I rested, and after carrying this burden about two hours longer, I overtook a man proceeding in the same direction, who, for a consideration, consented to carry part of my load to Manjobo's, which I reached an hour afterwards. As my servant did not come with the goods deposited at Matonse's kraal that night, I started early next morning, leaving as much as possible behind, notwithstanding which I suppose I carried some 50 lbs. weight. The country here loses its thick bushy appearance, becomes grassy and open, with here and there euphorbia, and a few vegetable-ivory trees, very similar in appearance to coco-nut trees. I walked all that day with only honey for food, and towards evening reached an immense bend in the river, extending north-easterly for about six miles. I therefore enquired the way to the sea, and was told that it crossed the river. On hailing one of the "Dug-outs," and after being kept waiting about four hours, I was condescendingly ferried across in this fearfully rickety machine, half full of water, for a few beads. I bought some sweet potatoes, and that night was taken to the petty chief living there to sleep. In passing along the river I was surprised at the countless number of crocodiles infesting it; on one little sandy island, some 50 feet in diameter, I counted no less than fifty large, besides numberless small ones, and on this account, although the river is fordable in some places with water about 4 feet deep, canoes are used. About four miles further down is the limit of the tidal rise.

Next morning I engaged a man to carry my things to the sea, making his Chief a present and paying him in advance, although on starting I did not feel much elated at having procured this assistance, for I noticed that the man omitted to take his rug with him, and I therefore knew I might expect to be deserted at any moment. After proceeding about a mile or two he put the things down and asked for more payment, and on my refusal to comply with his request, left them on the ground and walked off. I put the best face I could on the matter, and, shouldering the whole of the things, went on, trying to dispel dull feelings and angry thoughts by whistling a tune, but I am afraid it was a miserable failure. I trudged on that day, asking the natives I met, in the little broken Caffre I could muster, if I was going

right, and was generally answered, "Yes; that the sea was three days' walk." About two o'clock in the day I came to some very large kraals, which I was informed were the Chief's—I was also told that he was over the river, and that I must wait for the boat. I waited for some time, but whenever I approached a boat the ferrymen immediately pushed off; therefore, seeing that I was to be detained that night on this side, I made an effort to continue my journey without crossing the river, but soon returned, as the natives insisted that the road to the sea was on the other side of the river.

I had great difficulty in buying food, as my stock of goods was low, and the natives, as usual, profited by the occasion of a lone white man being in their power, not actually to rob by force, but to starve his goods out of him. I therefore contented myself with some sweet potatoes and a fowl.

I held a grand consultation with all the councillors, and they agreed in stating that I should sleep four days on the road before I reached the sea. Consequently, as I had only one ring of brass wire left with which to provide myself with food, I decided to return next morning. Here, as also at Manjobo's, the natives were surprised at my white face and hands: "This is a white man," they said, "the Portuguese call themselves white, but they are red" (*imbomvu*). I told them my body was whiter than my face. "Take off your clothes and show us," said they. I told them that white men did not take off their clothes in public, but I would show them my chest, at which they were much surprised and delighted, and said my skin was "very pretty." I infer from this that they had never seen a truly white man before, and that therefore the statements of certain Dutch Boers and hunters of having visited this country are not true, and that, with the exception of those natives who had been at Delagoa Bay and Inhambane, they had never seen an European before. They told me it was five days' walk to Delagoa Bay, or Umvuma, as they called it, at the mouth of the Umkomogazi River, the Umkomati of the Boers, and Manhissa, or Manicose, of the Portuguese. They have still another name for the river here, "Meti," which adds one more to the list, Limpopo, Krokodil, Ouri, or Bembe; and, as my observations seem to point out the Inhampura River's mouth as the outlet, the list may be still further increased. In ancient geography the river is called "Spirito Sancto."

Next morning I started on my return, accompanied by two men, I suppose as guards, to prevent my dodging down the river, and I accomplished the same journey down in one day which I had taken two for on a former occasion. Neither of these

men would carry a single article for me. I was as poor as an "Umfokazan," which is here a more heinous sin than it is even in Europe. I was no "Inkosi," I was not even a rich man; and could they, the king's messengers, be expected to carry things for an "Umfokazan"? This was the invariable reply when I asked them to relieve me of some of my load.

Two days afterwards I got to my friends Wood and Dubois, with the intention of abandoning my purpose if one of them would not accompany me, as I found that I could not get on from want of bearers and my inability to speak "Zulu," the language of the country, and in consequence of the contempt and suspicion with which they regarded a white man carrying his own things in pursuit of an object which to them seemed so absurd. I heard from Wood that McLachlan and Ash, who had been so kind to me in Leydenburg, were about 3 hours' walk from the river, trading. As all the assistance they could give me had been rendered, they advised that I should see McLachlan and get his help. They said also that Robert Dubois, having gone to Manjobo's in consequence of the reports I had brought, would perhaps, from his great knowledge of the language, obtain some information upon which I could act. I therefore went over to McLachlan, and he advised me on no account to give up my object, thereby wasting the expense, trouble, and anxiety to which I had been put, and he said that he had ascertained that the sea was only five days' walk from where we were, and therefore not more than two from where I had turned back. He generously allowed me to hire two of his men, and as they did not know me, stood security for the (to them) handsome payment of five blankets each for the trip down and back. He gave me all the goods I wanted, and treated me with the generosity for which he is well known. Allow me here to record my thanks to him, and also to the two Dubois and poor Wood (whose death will be mentioned) for the kindness shown to me by them.

I returned the next morning to Umlanjane's, and heard from Mr. Edmund Dubois that Manjobo had sent to enquire of my whereabouts, and, on being told that I was returning homewards, said, "It is well." Dubois seemed to interpret this into a threat; but, after consulting McLachlan, I determined to proceed. After a walk of about 70 miles, I reached Manjobo's for the third time, and there found Messrs. Robert Dubois and Ash. I consulted with Dubois, and got him to interpret to Manjobo and explain the object of my journey; but this Chief still refused his permission to my proceeding, and said that if I went it would be bad for me. Dubois asked what he meant.

He said, "Oh! he will not be killed; but he will be lost, and you will hear no more of him." I continued my journey, notwithstanding.

Near this kraal I saw a large herd of about 30 sea-cows. I would not shoot any, as the Caffres who had treated me so badly would have reaped the benefit. Dubois shot one, which came to the surface about 8 o'clock, two hours after being killed. He and some 30 Caffres and myself removed to the river. Dubois, having just recovered from fever, did not like going in, and until I led the way no Caffres would go and drag the sea-cow out, for fear of alligators. After being shamed into it, some followed me.

Beyond Manjobo's the country is still open, and thickly inhabited near the river, and on the few streams flowing into it. The soil is of the richest alluvium, and produces every variety of "native" food, principally maize, sorghum, sweet potatoes, yams, sugar-cane, bananas, and several varieties of beans, as well as tobacco of a better growth, and more carefully cultivated than a great deal I have seen grown in Natal by Europeans. The leaves are enormously large and round, and the natives understand the practice of "nipping" off the blossoms to give greater strength to the leaves, and hand-weed and hoe the plants continually. I think I omitted to mention that the sands of the river contain numbers of small white shells, about as large as a "silver penny," of the cockle species, more numerous from Manjobo's to Siduda's than elsewhere. I have no idea whether these were fresh- or salt-water shells, but from the uniform level of the country, and the fact that I saw somewhat similar shells beyond the limit of brackish water, I think that either the tide had at one time ascended further up the river, or that the sea covered this tract of country, and that these were marine shells. I also observed at Isingfungatane's kraal, in fresh water, a description of periwinkle on pieces of old timber and canoes. I much regret not having brought back some of the small "cockle shells;" but after having collected specimens, I threw them away, intending on my return journey to get more; but owing to anxiety, starvation, exhaustion, and fever, my thoughts were then more directed to the preservation of my life than to the evidences of geological formations.

While I am on the geological theme, though no geologist myself, I think I may venture to state that the country is of recent formation, from the fact of the shells referred to being found at considerable depths below the surface, and from the existence of newly formed sandstone like that found on the

“Bluff” at Port Natal on the sea-shore, and at Umhamba’s. I observed that this stone generally presented a flat surface full of holes and depressions, and that although hard, it was rotten and porous.

With regard to the appearance of the country higher up and along the course of the Lipalule or Oliphant’s River, I think it may be referred to an older formation, as amygdaloid, quartzose rock, and ironstone, present themselves above the ground, more especially about the Sorgobiti River.

I think at one time the ocean must have covered this country, on account of the generally sandy nature of the surface, and the worn appearance of some of the rocks; but I also remarked that the ironstone had been little affected by anything except what might be ascribed to atmospheric causes.

To return to my weary journey. I arrived at Siduda’s kraal about one o’clock in the day. He kept me waiting about an hour and a half before he condescended to appear. His first words were, “I am a Chief, I am the Great Chief Siduda, a Bonguni (direct descendant from the Zulus), I speak only through presents” (*harkerlè*). This was not a pleasant reception, and his subsequent conduct was in accordance with it. I gave him a present, and explained my object to the best of my ability, as neither of the men I got from McLachlan could understand English, or much of my indifferent Zulu, as they were either of Manjaje’s or Umjaje’s tribe. The Chief himself spoke pure Zulu, which enabled me to understand and explain things after a fashion. I told him that Ash wanted to buy ivory, and that if he sent for him with a note from me he would come. He replied, “Yes, that was a good proposition; that my two men must go with a note, and I must remain until they returned, and that he would send a messenger to Manjobo to see why I had no one from him.” Now, knowing that Manjobo was against my going on, I determined, at all hazards, to get to the sea before he could be communicated with, as I knew my fate if he once heard that I was determined to go on. I therefore replied that it was impossible, because, if Ash came, I wished to shoot hippopotami (*imvubu*) with him, and that I could not do so if I had to go to the sea then. Siduda insisted on his proposal; I at once started, but my two men refused to follow. I, therefore, was once again alone, without bearers or instruments, and with but few goods; but with a stout heart I set out. I was followed by about fifty natives, who poked sticks in my face, and otherwise tried to hinder me: at last one caught hold of my gun, which was on my shoulder; I could not shorten my grip soon enough to deal a blow, as the “swarm” was rapidly closing on me, I therefore drew my revolver, which I had before

luckily explained to them as having five men's lives at its disposal. On its appearance they left my gun and kept their distance, and, soon after, went away; but I had not proceeded far before I was again followed, and told that Siduda would give me a man to go to the sea if I would return. I therefore made them go in front and did so. Luckily I kept a sharp eye on their movements, for, as the path led through a fence of reeds, I observed them, through the chinks here and there, clustered and stooping behind it ready to pounce on me. Seeing this, I passed through another opening some ten yards behind them, and, until I turned and laughed at them, they were unaware of my whereabouts, but as intent as ever, with their hands all ready for a pounce. They all came away like dogs with their tails between their legs, amidst the derisive shouts of the old men and councillors assembled under a tree hard by. I was requested to sit down amidst the throng, but I asked that all might sit in front of me, as I had already experienced their attentions: this was received with laughter. I was then shown the man who was to go with me; but, knowing their lying propensities, I scarcely looked at him, beyond seeing that he was a councillor, and therefore not likely to serve as a guide. My two men, who had in the mean time started homewards, were sent for; but only one was brought back, almost by force, and the other was considerably expedited in his retreat. I imagined that these men had been persuaded to run away, and that the one was made to return. I therefore told the Chief that Ash would not come unless I wrote, and that the runaway would only be punished for his cowardly and treacherous conduct by his master. He therefore proposed that my servant should go, together with a messenger from him, and that I should be supplied with a man to accompany me to the sea. I therefore wrote the note, and next morning I went one way, and my servant another; and I was thus again without any one accountable for my safety. But little did I care when the accomplishment of the object of my journey burst upon my view, through an opening between two sand-hills, looking like caps of snow in the distance. Between those hills ran the Bembe River, and on the other side was its mouth. I felt capable of undergoing anything at that moment, forgetting the solitude, sickness, and despair I had suffered; forgetting that I was at the mercy of savages, and that I had to walk 600 miles before I should again behold "home, sweet home." Those only who have suffered the same hardships can appreciate that yearning for civilised society, and that dread of passing again through the trials and dangers I had experienced. I slept at Isinfungatane's kraal, on the southern side of the river, and

recrossed again next morning. After going along the bank, and passing through part of the "fen" I had waded through for four hours on the previous day, I crossed three small streams, left the immediate bank of the river, and began to ascend the Umtshan-tshan hills, to avoid a large marsh which is impassable, and which stretches from this point to the hills bordering the sea, and on each side of the river for about 5 miles.

There is a great change in the country here—fine grassy hills dotted with clumps of bush, and views of the sea-range in the distance, displaying the bare sand in places, make their appearance. The soil of these hills is red, and is much like the soil of some of the coffee-land at Natal, on the coast. I observed in the valleys below small, clear, fresh-water lakes, and here and there a marsh, with papyrus-rush rearing its fine hairy head to a height of 20 feet, from stems as large as my arm. To the right was the marsh I was skirting, stretching for about five miles to the river and beyond to some hills, under which flowed the Inculuzane River, which discharges itself into the Bembe within some three miles of the sea. I ascended a rise, and the Caffre said "There is the sea" ("Nantsi Luanhla"). I then passed through thick bush, which borders the coast, and arrived at the Indian Ocean.

As it was only about 4:30 P.M., I wished to go at once along the beach to the mouth of the river, which I judged was about eight miles to the southwards; but my bearer and guide would not accompany me; I therefore told him to await my return, and I started alone. I did not get along very fast owing to the steepness of the beach, which left little hard sand. About six o'clock, seeing a path through the bush, I climbed up, hoping to obtain a view of the country, but I found it only led to some temporary fishing-huts, and, seeing evidences of habitation, I determined to stop there for the night. I tried to penetrate further, but found it impossible from the density of the scrub. The Caffres returned meanwhile with some water they had got at the lakes referred to, and also with shell-fish which they had collected, consisting of "sea-eggs," mussels, and some other species. They gave me water, and, in return, I gave them some "stamped" maize (U'parsula), and we three made our frugal supper off the shell-fish, roasted on the embers, and the "maize," with "Adam's ale," which had been my drink for the last few months.

Next morning, before sunrise, I got under weigh, and walked for nearly three hours without reaching the river, and, seeing some natives coming down to the beach in the distance, I beckoned them to approach. On their arrival I asked where the "Bembe" was. They said "There"—pointing a mile or so

on. I certainly saw a faint black line, but was so convinced that the river could not enter the sea in so insignificant a manner that I employed one to show it to me; he went about 500 yards on to a small rise of sand amidst the surrounding waste, and pointed out the lagoon and mouth of the river, which was now plainly before me. He then turned back and left. A few moments after, I stood gazing on the long-sought mouth of the Limpopo or Bembe River.

The thought crossed me, Is it worth while "to have gone through so much to get so little"? A stream of about 300 yards wide (at full tide) flowed into the ocean, and although it was not rough inshore, I noticed the sea breaking some three miles out, not in one "roller," as on a bar, but in a succession of small "breakers," until it reached the shore, thereby, I think, demonstrating, that though no marked sand-bar existed, there was great shallowness of water outwards for about three miles. Whether or not channels exist through this sand, I am unable to judge, having had no means of ascertaining the fact. I waited until noon for observations.

As the natural horizon was concealed to the northwards by land, and as, already mentioned, the loss of my mercury prevented me from using an artificial one, I was obliged to take a back observation for latitude, and was prevented altogether from getting the longitude. As the coast-line has been pretty accurately laid down by abler hands than mine, and with better appliances than I could have used, I do not so much regret this; having settled satisfactorily the latitude by a "reduction to the meridian" and a "meridian altitude," I found that the mouth of the Limpopo River is situate on the eastern coast of Africa in lat.  $25^{\circ} 15' 09''$  s., according to a meridian altitude (or by a reduction to the meridian—an approximate method— $25^{\circ} 15' 29''$  s.), and in about  $33^{\circ} 42'$  of E. long.

The shore on the northern side of the river is a flat of loose sand, evidently overflowed by the river occasionally in summer, and perhaps by the sea at spring-tides. More to the north, up the coast, high sand-dunes, in some places clothed with scrub almost to the summit, but in others in their naked dreariness, appear. The sandy ridges and bare patches give the appearance of snow when seen at a distance inland. There is a lagoon, about one mile wide and five miles long, and a channel, about 100 yards long, connects it with the ocean. I bathed in the mouth of the river, but on account of crocodiles and the feeling that if I was lost no account could be given of my expedition, as I was alone, I refrained from going further than where the water reached my chin; this was about 20 yards from the shore, and at that point there was evidently a deep channel, as the

bottom shelved so sharply that I could hardly stand. This was at low tide; and I much regretted not being able to see the place at high water. I retraced my steps, and found my man awaiting me; I slept on the shore that night, and made Isingungatane's kraal next day. This kraal being on the southern side of the river, I was obliged to cross, and as it was raining, no Caffres could be seen outside their huts, neither could they be brought to the river by shouting; I therefore told the bearer to swim across for the boat, but he refused, and said, "There are crocodiles, who bite men." I then jumped in and swam across, as it would have been certain death to have remained in wet things all night.

I found the river far out of my depth from bank to bank, and until then was unaware of the weak state I was in; I could hardly reach the opposite shore, though the distance was only about 300 yards. My clothes were half-dried during the night, and I reached Siduda's next day. Here I found my servant, who had been with the messenger with the note for Ash. He had returned before my messenger got to Manjobo's, and therefore he had not seen him. I then wished to start, but the man who took me to the sea insisted upon more payment than that which had been agreed to and already given before my start; I refused and tried to force my way, but found that the natives behaved in the most insulting manner, poking sticks in my face and beating my servant. I therefore returned to the Chief, and asked what he meant by allowing such behaviour; he only laughed, and told me to pay the man again. I explained how impossible this was, as I had only one ring of wire and some honey to provide myself with food for the four days' journey which I must make before I could reach my friends; he still said that I must pay. One of his councillors asked to look at the wire. Knowing that he would keep it, I refused to give it; but on his promising to return it, I let him have it, but could not get it back again. I felt much inclined to hit him between the eyes, which were temptingly placed within a very convenient distance for such a purpose; but as this would have been the signal for my instant destruction, I "stayed my hand" and made another attempt to start, but was again detained and had at last to abandon my large pot of honey, of which I had already given them half. This appeared to appease their thirst for plunder, as nothing else was left for them. Before I gave the honey they were getting very excited, and had caught hold of my gun once or twice; but on my presenting my revolver they relinquished their hold. I was afraid every moment that some adventurous spirit might be tempted to strike me with a stick, which would have necessitated my shooting him,

to prevent the signal being acted upon by the rest of the crowd. I slept at a kraal some three hours' walk further up the river, which marks the place of the furthest extent of the tidal rise.

I had made a present to the owner of this kraal on my first journey, and now begged that he would give me some food. For a long time he said there was not any; but on my saying to him that I saw some pots, containing sweet potatoes, and others, with lids on, on the fire, but that I supposed they were only sticks for muti (medicine), and so on, in a chaffy way, at last he was shamed into sending some "stamped" maize, though not nearly enough for one small appetite, much less for my servant and myself. Happening to have a blue handkerchief, it supplied one feed for the next two and a half days' walk, during which I suffered the most frightful headache that I have ever experienced—the first decided token of fever. I arrived at Umlanjane's on the evening of the ninth day from my start from Manjobo's, having walked 140 miles at least, and on two successive days for eleven hours each day without stopping. Deducting three days from this time for compulsory delays, I still had six days' walking, in a state of high fever.

My friends were gone—McLachlan to the south-west and Dubois to the south-east. There was no alternative but to follow as rapidly as possible, and as Dubois was the nearer and the natives seemed to know more about him, I followed on his track, though my large gun, clothes, and artificial horizon were with McLachlan. I afterwards regretted not following McLachlan; but at the time I knew not whether the man who had deserted with my horizon had gone back to his master. On account of the want of goods wherewith to buy food I could not follow him, and as Dubois had left messages to the effect that what I promised in his name would be paid, I was enabled to follow his track with greater ease. I stayed a day at Umlanjane's, as I felt utterly incapable of proceeding with this fearful headache, but started next day, and on the succeeding morning arrived at Umchabele's kraal, where I found Dubois' party.

Mr. Jonathan and Edmund Dubois were in a state of high fever, had their heads wrapped in wet clothes, and were incapable of the slightest exertion. Five Caffres were also in the same condition. About an hour after my arrival Mr. Robert Dubois returned, also suffering severely from the effects of the charge of a buffalo, which had knocked him down, split all the flesh off his thumb, and so damaged his ribs that for a month afterwards he was almost helpless.

One of the native hunters had wounded a buffalo, which he was afraid to follow. Dubois, therefore, took up the trail; an unarmed Caffre accompanied him. This man saw the buffalo in

a bush, and tried to point him out to Dubois, who was however unable to see him; they, therefore, moved round the bush, and the buffalo charged, before Dubois, who was still weak from fever, could raise his gun; the brute knocked him over and began pommelling him with his muzzle and kneading him with his knees. Dubois raised his gun, whilst lying in this position, and tried to shoot, but found the hammer of it gone; he then tried to get his knife in order to strike the cap, but the buffalo's knee being on his side, he was unable to do so. Just at this moment the native, who had meanwhile been ensconced in a tree, came gallantly (for a native) to the rescue, and with an assegai stabbed the buffalo, and said, "That's my game!" the animal then left Dubois to chase the Caffre. At this critical moment the black hunter, who had originally wounded the beast, appeared; the other native then ran to him, took his gun and shot the buffalo, as it was again charging Dubois. It now appeared to me as if I had got "out of the frying-pan into the fire;" three men out of the four were incapable of helping themselves, and the fourth, myself, already attacked by fever—all the bearers and hunters being in a like helpless condition. I told Wood that I feared I might be an incumbrance to them; but he said, "Not to me, for I shall die here!" little thinking, poor fellow! that although he would recover from his present attack of fever, he would die so soon afterwards. In this pestilential spot we remained for a week, and then crawled on some four miles, being the utmost distance the weaker of the party were able to accomplish.

The next day we could only go six miles to some kraals, where we stayed about four days. The country since leaving the Limpopo was of the usual flat character, covered with bush. It having recently rained, there was an abundant supply of water, which lay in clear pools on the surface, and the streams were now running. The soil, being generally composed of coarse gravel, did not appear to be unhealthy: but I conclude that the unhealthiness of the summer months must be attributed to the exhalation of the pools of water which remain from the wet season, the country being nearly a dead level. It is sparsely inhabited by natives, who appear to suffer little from fever.

After this rest we managed to make in two days a distance of 20 miles reaching other kraals, where we stayed five days, unable to move from weakness. The Caffres, as usual, were sent to hunt, and, as I was the only one able to move, I went with them, but found that I had over-estimated my strength, and soon turned back, though even at that distance, some four miles from the kraals, I saw elands, giraffes, brindled gnu, zebras, and impalas, and my guide went off on the spoor of some buffaloes, one of which he shot. I had hardly got back when the Caffres

reported that two or three lions had been seen, and that one which was feeding upon a gnu was not far off. I shouldered my gun, and was joined by a host of Caffres, who made such a noise that few lions, I should think, would have faced them; but the clamour grew "smaller by degrees and beautifully less," the nearer we approached to the "king of beasts," and on arriving within 500 yards, they all drew up in a line, and I at last got to the front, which I was prevented from doing before, from my inability to keep pace with the gang. I had not advanced more than 20 yards, when an animal, about the size of a fox-hound, sprang up and made off, tail on end, and at a pace which defied pursuit. This was a "live lion." Ill as I was, I threw myself on the ground convulsed with laughter, and called to the Caffres to "Catch him alive, O!" They set up a yell, which sent him whining with fright, and lent wings to his flight. This was my first and last lion-hunt, though there are plenty of lions in the country, as we heard them frequently, and the Caffres saw many.

We started then for the Sabi River, distant about 5 hours' journey. Skirting the eastern side of the Bomba Hills, which we had struck the previous day, and sleeping out one night, we came on the Sabi River. Poor Wood had all along been very ill and weak, and on arriving at this point declared his inability to proceed further. Caffres were sent a-head, to bring men to carry him, at all events, to an inhabited country, which this was not, the nearest kraals being those by which we had slept the previous night. This being the boundary between the Amaswazi and Umzeila's people, no bearers could be procured from behind. We encamped under a large tree on the banks of the river, and poor Wood bathed with me that afternoon for the last time. The fever having left the party, we were only suffering from weakness, and although Wood was the weakest, we had hopes of his recovery; but the disease took a fresh form, with which exhausted nature was no longer able to contend, and he gradually sunk, his latter moments being happily passed in a state of insensibility, having previously dictated a note for his only brother, to whom he bequeathed his property. Poor fellow, he was an educated and amiable gentleman, who had come to this pestilential place, more with an idea of pleasure than of profit. I felt his loss severely, as, from my greater strength, I had been his constant companion. On the first attack he had spoken of his death, but neither of us expected that it would occur on this second attack so soon or so suddenly. We buried him under a large tree by the bank of the river; other travellers, perhaps, may some day see the heap of stones, which here marks the grave of another victim to that restless

spirit of enterprise and discovery which is characteristic of our nation. The greatest difficulty was experienced in digging the grave, all the implements available being a Caffre pick without a handle, and a tin dish: in spite of this, and of our state of debility, we managed to excavate a pit about 5 feet deep, wherein he was laid, and the beautiful funeral service of the Church of England was read; so impressive at all times, but doubly so to those who were themselves in the valley of the "shadow of death," and doubtful whether even such sepulture as this might be accorded to them. During this melancholy scene a fire was raging in the trees around, which had been kindled by our Caffres to procure some honey, and the trees fell so closely about us as nearly to destroy our few remaining things.

We started on the march soon after we had buried Wood. Edmund Dubois being scarcely able to drag himself along, and I being in but little better plight, we were not able to make much way. We had also chronic dysentery, caused by exposure to a scorching sun, over-exertion on foot by day, and heavy dews without shelter by night, and by the bad and scanty food obtainable, consisting sometimes wholly of vegetable and other times of animal diet; stinking maize or bad meat, accordingly as we were, or were not, near to kraals.

The next day it rained incessantly, and we were glad, on reaching the Umgweni River, to get into some deserted huts, so as to divest ourselves of our soaked garments, and dry them as best we might; meanwhile, wrapping ourselves up, by way of change, in our wet blankets. Being short of meat we determined to remain here a day to shoot some; the Caffres shot two buffaloes. This river is about the same size as the Sabi, both having a good flow of water in this the dry season, fordable in most places, and broken by falls and rapids.

The Sabi River passes through the Bomba Hills, and joins the Umkomogazi, or Umkomati River on the *eastern side*, but the Umgweni River joins the Umkomogazi on this (*the western*) side, about four miles down from this point, and immediately at the junction escapes through the range; a river further to the south, the Umlumazi, also falls into the Umkomogazi, on this side of the Bomba. Afterwards we crossed the Umkomogazi itself. This is, I believe, the only reliable information ever furnished with regard to these rivers, the latitude of which I much regretted being unable to lay down, owing to the flight of the Caffre with my artificial horizon. I tried all sorts of substitutes, but the breeze was always too strong for a successful set. The country begins to have here a more broken appearance, especially to the westward, where hill may be seen

beetling over hill, until lost in the faint blue outline of the Drakenbergen; immediately along the eastern side runs the "Bomba," which shuts out further view. I believe this country is held to be comparatively healthy, and, from the good drainage it possesses, I should think that the fever, when experienced, would take a very mild form.

The next day we reached the Umlumazi River, and at once set the Caffres to work to shoot hippopotami; three were soon bagged out of a large herd of twenty. Having our minds set at ease by this plentiful supply of the best meat that "Wild Africa" affords, we determined to remain one day, to have a "blow out" and recruit our exhausted energies. On the first appearance of one of the dead hippopotami on the water, the Caffres refused to go in after it. I wished to do so, but Dubois advised me not, on account of the rest of the herd, which were "blowing" round about it; we therefore made a small raft, and with my legs dangling in the water on each side, I paddled into the stream. But the "river-horse" had floated off a shoal, and was now fast going down-stream; I therefore deserted the raft and swam after the animal; it came to the shore. After taking as much meat as we required, a great deal was left on the rocks; next morning not a bone of this was to be seen, crocodiles having seized the whole during the night. Little did I dream of their existence when I was disporting in the water the day before. It was so aggravating to be in a game country and have no shooting, that I determined to try for a sea-cow, but after three shots, causing me such pain each time that I nearly screamed, I gave it up and went to bed with a racking headache. The rain poured down unceasingly all night, and again saturated our clothes, which were not yet recovered from the previous day's soaking.

The day after this we left, and got to the first kraals of the Amaswazi; there being no inhabitants between the kraals mentioned further back, across the Sabi River, and these, owing to the constant war between the Amaswazi and Umzeila, the cause of which has been already alluded to. We were glad to purchase some "buswa," or millet-meal and maize, as it was about five days since I had tasted farinaceous food, and I was suffering from dysentery, which I attributed to the meat diet and "*coffee*," made from "burnt-maize." I therefore gave up drinking this stuff, and imagined that I should get rid of my disease, but found that unvarying diet of either kind had the same bad effect. The natives had no cattle, and no game was here seen; we had, therefore, now to live entirely on vegetable food.

We dragged ourselves along, Edmund Dubois being still

very weak, and after one or two days' march, whilst still at some distance from a kraal, his strength failed him entirely. Two Caffres, his brother, and myself, then carried him between us. I shall never forget the weight of one-quarter of a man, which was my share of the burden. At this time I was so weak that I could not carry my gun, and, in fact, was so ill that I hardly knew whether I should be able to go on the next day. The additional weight of, perhaps, 40 lbs., and that in the form of a man who could not stiffen himself to allow of his being carried with ease, caused the perspiration to pour from our already reeking bodies, and left a sensation of horror on the mind which will not be easily effaced.

On our arrival in this miserable plight at the kraal, we determined to allow time for Edmund Dubois to recover before any further move was made. Food was scarce at the kraal, and our only other drink besides water—namely, Caffre beer, or Tsuala—was not to be had. We spent six miserable days here, constantly physicking Edmund Dubois with chalk, opium, and laudanum. He was so weak and irritable that he required constant attendance, and to be supported out of the hut occasionally. During this time we lived principally on guinea-fowls, and sometimes got a pheasant. We had, happily, sent on the Caffres, with the exception of two, to the waggon, still some four days' walk ahead, so that only half-a-dozen mouths had to be provided for.

The country was still bushy, but more broken and better watered; the Umkomogazi River, referred to before, flows past the southern side of the kraal. It is a small river, broken by falls and rapids, but, I believe, tolerably navigable immediately after it passes through the Bomba Hills at the Umgweni River. We made a miserable day's trek to Mahorbo's kraal, and I then persuaded Robert Dubois at last to leave his brother in my charge, and get as fast as possible to the wagon, to send back some brandy and other comforts for him; so he started, and we followed slowly. After passing over very broken, well-watered, and apparently healthy country, we crossed the Umbolosi River (not Umvoloose) and got to the wagon. The rats had eaten a great deal of our stores and destroyed all the remainder of the flour, and the clothes were filled with bugs; but, as we had been pretty well "broken-in" to every description of disgusting insect, we considered bugs comparatively clean. All our anticipations of fine feeds of bread were dispelled; we certainly did cook some, and, though full of rats' dung, considered it such a delicacy that it was determined to keep it for pressing emergencies. Milk there was in plenty,

but until the system was thoroughly clear of fever it was a forbidden luxury. Calomel, salts, antibilious pills, and quinine (of which, luckily, I had a plentiful supply throughout the trek), together with some Dover's powders and soap and water, soon made us feel at least able to walk without pain; but the dysentery did not entirely leave the party until after our arrival in Natal, nor even then altogether.

On this river granite crops out—the first I had seen—and according to the native account it runs inland for a great distance. The country is more interesting than any I had hitherto met. It is open and grassy, with a little bush in the hollows, and masses of rock cropping out on the hills in every variety of form and colour.

We had been about thirty-seven days dragging our diseased bodies from the Bembe to this point, which can ordinarily be done in fifteen days easily on foot. I tried to get some observations here, but on account of the constant breeze I could not command a good reflection from water, &c. It is an extraordinary circumstance that during the whole of this journey from the sea the wind blew so constantly, either from the N.W. in the morning or S.S.E. in the afternoon, that I was unable to obtain an observation from any reflecting liquid surface, the only means available.

The country changes little further on; and besides the general absence of game, extreme salubrity, abundance of mists, and plentiful supply of water, there was little worthy of notice. No road exists; therefore it is not very wonderful that the wagon was capsized, the tent smashed, and a good deal of other damage done.

The White Umvoloose River was crossed, and afterwards the Little Usutu and Great Usutu, the Ingwempisi, the Umkonto (all forming the River Usutu on the western side of the Bomba Hills). Leaving the Ingwâvuma River to the west, we passed the Pongolo. As these rivers and the intervening country have lately been claimed by the Government of the South African Republic, I shall describe the district to the best of my ability. It is well watered, and, to within 30 miles of the Bomba, healthy; it is well suited for cattle, and on the higher lands for horses and sheep. The soil is generally red clay, but in the lowlands is rich; the natives reap good crops of sorghum, sweet potatoes, &c.

The country within 30 miles of the Bomba Hills is flat and bushy, abounds in Tsetse-fly and game, and is unhealthy, and therefore thinly inhabited. The Bomba Hills are inhabited along their summits, and are composed of sandstone with a species of blue granite or whinstone, lying on the top in round

red stones, which, when broken, display one or other tint. On the eastern side of the range it is extremely unhealthy, inclined to be marshy, and there also the Tsetse-fly abounds.

On this side of the hills the Ingwavuma River joins the Pongolo, which then discharges itself into the Usutu, and forms what is improperly called the Mapoota River, that flows into Delagoa Bay on its southern side.

The country claimed by the Republic extends down the Umkomogazi up to its passage through the Bomba Hills, along that range southwards (the boundary of the Amaswazi) to the Usutu, and down one mile on each side of the Mapoota to the sea, up the Pongolo River, and along it to the Bivaan River. From the Bivaan to Rorkes, in Natal, was proclaimed as annexed about the year 1858, but was not occupied by the Boers. On reference to the map, this annexation will be easily traced in the Amaswazi, the Amatonga, and the Amazulu countries, between the frontier of Natal and Delagoa Bay. The Mapoota River is navigable only some 30 miles up, to within a few miles of the junction of the Usutu and Pongolo.

Little further is left to be told, except that I had bad attacks of liver-complaint, and grew excessively weak for want of nourishing food after the attack of fever. I passed the Bivaan River, the head-waters of the Umvoloose River, and the Blood River, below Utrecht, and after crossing the Buffalo River again set my foot in Natal. I purchased a horse, and with some pain and difficulty, and with the assistance of friends' carriages, reached Pietermaritzburg. My weight, on arrival, was 9 stone 3 lbs.; six weeks afterwards I weighed 11 stone 5 lbs., being a stone over my usual weight. I had so changed, from the hardships suffered and from the yellowness of my skin and the hollowness of my eyes, that my own father and sister did not know me. My friends assert that I was light-headed. I am now in good health, but extremely stout.

The result of my examination of the country to the north and north-east of Natal is, that in that vast tract of excellent land—many times larger than Natal or England—there are a great many parts fertile and healthy for man and beast, and which can now hardly be said to be peopled at all. The fly would be no barrier to the settlement of this district, as it would most likely disappear before civilization and probably with the game; there are no powerful tribes, nor, indeed, any native residents who would seriously oppose the gradual occupation of the country by white men. The country would, in all probability, be reached with facility either from Delagoa Bay or Inhambane, and it is generally healthy to within

150 miles of the coast. The former route is now being surveyed by my brother Townsend for the Glasgow and South African Company, with the view of opening up the lands for them on the western borders of the Amaswazi. It is extremely desirable that the country between the Limpopo and the U'Sabia River, and the course of the latter to its mouth, should be explored, as there is reason to suppose that it may be navigable. This is the country which is described by old geographical writers as the land of Sofala (or Ophir) and Monomotapa, and as being very rich in gold: the quantity of gold exported thence in former days by the Portuguese is stated to have amounted to millions annually, and large and wealthy cities are described as having existed there.

Ill news flies apace. An officious person had ridden in from the northern frontier of the colony with the intelligence that I had been picked up, by a Boer, lying on my blanket, in the veldt nearly dead, beyond Zoutpansberg, and my father was about to start in search of me, when I walked into his room. He did not recognise me, and thought I was a bird of ill omen arrived to confirm his forebodings of evil. All is well that ends well. But, though quite willing to undertake a similar expedition for a similar purpose, I would never do so unless properly equipped. I made two grand mistakes on this occasion: the first, in going without sufficient goods for presents and barter; the second, in travelling in the character of an explorer instead of in that of a trader. Had I gone as the latter, I should have had no trouble with the natives. The one great advantage I possessed was that I had plenty of medicine; without which this we might all have remained with our poor friend Wood.

My younger brother is so far from being discouraged by my adventures that he is anxious to start at once on a sporting trip in my footsteps, accompanied by donkeys only, which are the best companions a man can have on the Limpopo. I am now a sleek Treasury clerk again, thinking more of tare and tret than of latitude and longitude; but, like Sinbad the Sailor and Robinson Crusoe, I think it likely that the spirit of wandering is only laid, not exorcised; and that if my services are again required in the cause of science, they will be again at the disposal of the Royal Geographical Society, at whose instigation I undertook the discovery of the sources of the Limpopo, Bembe, or Spirito Sancto River.

# APPENDIX I.

## MR. ERSKINE'S ITINERARY FROM LEYDENBURG TO THE MOUTH OF THE LIMPOPO.

PLACE.		DATE.		TIME.			Rate in Miles per Hour.	Magnetic Direction.	Variation of Compass.	Miles Traversed.	REMARKS.
From	To	Day of Week.	Month.	From	To	Total.					
Leydenburg, 25° 4' S. lat., 31° 30' E. long.		Tuesday .	1893, June 30	1-15 A.M.	3-40 P.M.	2-25	4	E.N.E.	24 W.	9	Crossed Speek Boom River, flowing W., 3-40.
	Schoeman's . . . .	"	" "	4-25 P.M.	6-25	2-0	4	N.E.	"	8	Succession of mountains, bor- dering path, covered with birch.
	River Umchasingwana	Wednesday	July 1	6-25 P.M.	8-0	1-35	3½	E. by N.	"	7	At 11-45 crossed rivulet.
		"	" "	11 A.M.	11-45 A.M.	12-45	4	E.	"	3	Umchasingwana flowing N., at 1-15 crossed a stream flow- ing W.
		"	" "	11-45	1-15 P.M.	2-30	4	N.	"	10	
		"	" "	4 P.M.	6-0	2-0	4	E.N.E.	"	8	
Umchasingwana River .	"	Thursday .	" 2	12-50 P.M.	2-45	2-55	3½	E.N.E.	"	12	Passed through Orlistead at 1-30; river flowing E., 1-50.
		"	" "	2-45 P.M.	4-15 P.M.	1-30	3½	N.E., a little easterly.	"	6	Passed river 4-15, flowing W.
		Friday .	" 3	8 A.M.	11-15 A.M.	3-15	3	E.	"	9	Crossed Umchasingwana at 10, and stopped on W. side with wagon, but crossed to other side to Trigardt's house.
Trigardt's, lat. 24° 2' S .	Foot of Berg . . . .	Monday .	July 13	11-15 12-5	12 5 2-30	1-0 2-25	3 3	N.E. E.	22 W. "	3 ..	Crossed River Umchasing- wana at 11-30, 11-45, 12-5, and 12-30, and small stream into above from W. at 2-25.
Foot of Berg . . . .	Top of Berg . . . .	Tuesday .	" 14	8-55	9-40	0-45	2½	E.N.E.	"	2	At 8-55 crossed stream (same as above) from river from W., twice; at 9-25 crossed another minute stream into river from W.
				9-40	11-40	2-0	2	E. by S.	"	4	At 10-40 crossed small stream from W.; at 11-40 another and another.

to the Mouth of the Limpopo.

## MR. ERSKINE'S ITINERARY FROM LEYDENBURG TO THE MOUTH OF THE LIMPOPO--continued.

PLACE.		DATE.		TIME.		Rate in Miles per Hour.	Magnetic Direction.	Variation of Compass.	Miles Traversed.	REMARKS.
From	To	Day of Week.	Month.	From	To					
			1868.							
Foot of Berg . . .	Top of Berg . . .	Tuesday .	July 14	1-20	2-55	2½	E. by N.	22 W.	3½	At 9-25 began ascending steep hills (1000 feet), and since 10 going along high level, Unchiasingwana River flowing in deep gorge to the right (E.) with high and precipitous banks, very high hills to E. across the valley, summit of Quathamba district about 10 miles, valley of Umchasi River below them. These hills, called Mosingwana, because inhabited by Chief of that name.
Top of Berg . . .	Imperani's Kraal . .	Wednesday	,, 15	9-50 A.M. 10-50 1 P.M.	1-0 2-10 2-25	2 2 3½	E. E.N.E. N.E.	,, ,, ,,	2 2 9	At 10 o'clock began descending the berg by "The Giant Stairs," about 1500 feet sheer drop. At 1 o'clock crossed Umchasi River, of which Unchiasingwana is an affluent flowing N.; crossed dry watercourses at 5-10, 5-30, 6-20 P.M.; stop at Imperani's Kraal at 7 o'clock.
Imperani's Kraal . . .	. . .	Thursday	,, 16	Stayed here.					13	
Imperani's Water-hole .	. . .	Friday .	,, 17	8-45	9-25	3	E.	,,	2	Water flowing N. at starting (stagnant).
				9-25	11-35	3	E.N.E. by N.	,,	6½	Water at 10-10 flowing N. under land, kraal at 11-35, 1-3 watercourse dry, 2-15 water-hole.
				1-5	2-15	3	,,	,,	3½	
Water-hole, an affluent of Sorghobiti.	. . .	Saturday .	,, 18	8-20 12-30	12-0 3-5	3 3	E. E.	,, ,,	11 8	9-25 dry watercourse flowing N. watercourse flowing under land, flowing N. River Umchasi at 10-10, 11-35 at 1 o'clock running N.E. by E. into 1-10 watercourse 11-15 (N.) water under land at 5-5, flowing N.E.
Affluent of Sorghobiti .	Sorghobiti River . .	Sunday .	,, 19	7-55	10-35	2½	E.	,,	8	Dry watercourse 8-40, 9-15, 10-15. Water in large course Sorghobiti River at 10-35, stop.
Sorghobiti River . . .	. . .	Monday .	,, 20	Went out shooting.						



## MR. ERSKINE'S ITINERARY FROM LEYDENBURG TO THE MOUTH OF THE LIMPOPO—continued.

PLACE.		DATE.		TIME.		Rate in Stations per Hour.	True Di- rection.	Variation of Compass.	Miles Traversed.	REMARKS.
From	To	Day of Week.	Month.	From	To					
"Meeting of Waters"	Stayed at confluence of rivers from arrival on July 29 until Aug. 9. Along side of Bembe or Limpopo.	Sunday	1863. Aug. 9	11-25	12-10	3	E. by S.	22 W.	2	12-10 reached side of Lifugwie Lake, about 3 miles from Bembe.
						3	S. by W.	"	6	Kraals at 1-10, 2-10.
						2	S. by E.	"	2	Kraals at 3-20 on rise of about 100 feet, Bembe distant half a mile, this rise continuation of that bordering northern bank of Lifugwie Lake.
Kraals on rise	Injobo's Kraal	Monday	,, 10	7-5	8-30	3	S.S.E.	"	4	3-20 stopping.
				8-30	9-15	3	S.W. by W.	"	5	
				10-15	11-45	3	S.E.	"	5	11-45 kraal.
Injobo's	Inculuwane Spring	Tuesday	,, 11	12-35	2-10	3	S.E. by S.	"	5	11-45 river bearing S.S.E.
				2-10	4-55	3	S.E. by S.	"	8	Kraals all along route flowing at 9-50. Kraals 11-5, at which are goats. 4-10 water-hole, say 4 miles from Bembe, and spring called Inculuwane, source of Benjane River flowing towards Bembe S.S.E.
				7-55	4-30	3	S. by E.	"	28	Stop at Matonse Kraal, where they have about 20 cows, the first cattle since leaving Leydenburg.
Inculuwane	Unhamba	Wednesday	,, 12	9-10	10-25	3	S.E.	"	4	Cross Benjane soon after start, 9-30 cross again, kraals all along.
				10-25	12-15	3	S.E. by S. a little E.	"	5	Saw first vegetable-ivory trees, 1-50 crossed Benjane again.
				1-40	4-40	3	"	"	9	Struck Bembe 4-10, about 100 yards broad. Stop at Unhamba's Kraal.
Unhamba	Manjobo	Thursday	,, 13	10-30	1-25	3	S. a little W.	"	8	Country, hitherto bush-covered, assumes open grassy appearance, with scattered euphorbias. Until 17th August staying at Manjobo's;

Manjobo's . . . . .	Ungy's . . . . .	Saturday . . . . .	23	10-0	5-20	7-20	2	S.W. by S.	15	Wandering greatly, following sinuosity of river, having no guide. Cross to S. side at 3-20. At 3 o'clock Bembe trending S., and turns at 4-30 to E.N.E. by N. for about 6 miles, kraals all along route.
Ungy's . . . . .	Opposite to Siduda's Kraal on S. bank of River.	Sunday . . . . .	24	9-15	2-35	5-20	2	S.S.W.	11	1 o'clock reached stagnant water, apparently old river-bed. Wandering along sinuosity of river.
Manjobo's . . . . .	Returned, &c., from Aug. 24 until Aug. 31, when I again arrive at Manjobo's.	Tuesday . . . . .	1	12-10	6-5	5-55	2	S.S.E. for 9 miles, and then to kraal S.W.	12	At 3-50 arrive at northern end of bend referred to. Stream Shogonene into Bembe at N. of bend, and Shozozole running stream at 6-5.
Kraal, as above . . . . .	Siduda . . . . .	Wednesday . . . . .	2	7-15	10-50	3-45	2	S.W.	7	10-10. Pond "Inyama" turning.
Siduda . . . . .	Ising-fungatana on S. side of Bembe or Meti.	Thursday . . . . .	3	9-15 12-0 2-0	12-0 2-0 3-30	2-45 2-0 1-30	2 2 2	W. by S.	6 4 3	At 10 o'clock river bends E.N.E. 4 miles, until approaching Umshani-shan Hills within 4 miles, then direct line to mouth S.W., distant about 15 miles, appearance of passage through hills, as if they were snow-capped, from the dazzling sand, 1 afterwards ascertained. (Friday 4th)
Ising-fungatana . . . . .	Sea-shore . . . . .	Friday . . . . .	4	9-25 11-40 12-0 1-30 4-0	10-40 12-0 1-30 4-0 5-30	1-15 0-20 1-30 2-10 1-30	2 2 2 2 2	W. by S.	3 4 3 3 3	stream into Bembe at 10-30 from N., and at 10-40 skirting marsh since 11-40, until sea-shore, about 5 miles broad and 2 long on each side of river passed, chains of fresh-water lakes from 12 o'clock to 4 o'clock. Sept. 5, Saturday, reached mouth of Kro-kodil, Limpopo, Bembe, or Meti River, lat. 25° 15' 9" S., about long. 33° 40' E.
Along shore . . . . .	Along shore . . . . .	Saturday . . . . .	5	7-15 9-0	8-30 10-30	1-15 1-30	2 2	W.	2 3	

Very tortuous.

## APPENDIX II.

ABSTRACT OF MR. ST. VINCENT ERSKINE'S OBSERVATIONS FOR LATITUDE,  
LONGITUDE, AND MAGNETIC BEARINGS.\**Leydenburg, Transvaal Republic.*

June 26, 1868.—Altitude of Sun—with Mercurial horizon under cover.

2nd Set	<sup>h.</sup>			..	Altitude	<sup>°</sup>	<sup>'</sup>	<sup>''</sup>
	1	25	12			71	2	15
	1	29	55			70	12	10
1st Set	1	31	0	..	,,	69	44	30
	1	9	20			74	17	0
	1	12	9			73	44	20
	1	14	38	..	,,	73	14	35

Result deduced .. 25° 3' 3" S. Latitude.

June 19, 1868.—By Meridian Altitude of Sun's Lower Limb.

Devoid of Index Error .. .. 82° 54' 20"

Result deduced .. 25° 4' 41" S.

*Trigardt's Farm, Elands Berg.*

July 11, 1868.—Meridian Altitude of Sun's Lower Limb 87° 17' 50"

Result deduced .. 20° 2' 19" S. Lat.

*Confluence of Limpopo and Lipalule.*August 1, 1868.—Meridian Altitude of Sun—Images overlapping rising.  
96° 29' 55"

Result deduced .. 23° 34' 36" S. Latitude.

July 30, 1868.—Double Altitude of Sun.

1st Observation	<sup>h.</sup>			..	Altitude	<sup>°</sup>	<sup>'</sup>	<sup>''</sup>
	10	45	32			92	28	0
„	10	49	57	..	,,	92	36	30
2nd Observation	10	54	45			93	18	10
„	10	56	51	..	,,	95	26	25

Result deduced .. 23° 50' S. Latitude.

*Umlanjane's Kraal on Bembe River.*

August 27, 1868.—Altitude of Sun.

<sup>h.</sup>			..	Altitude	<sup>°</sup>	<sup>'</sup>	<sup>''</sup>
12	40	14			110	48	50
12	41	15			110	49	50
12	42	26	..	,,	110	50	30

Result deduced .. 24° S. Latitude.

Meridian Altitude of Sun—Images separating rising,

110° 52' 0"

Result deduced .. 24° 24' 30" S. Latitude.

\* Supplied by Dr. R. J. Mann.

*Manjobo's Kraal on Bembe River.*

August 15, 1868.—Sun's Altitude.

Meridian sets—Images separating Rising ..  $102^{\circ} 15' 15''$ Result deduced ..  $24^{\circ} 41' 42''$  S. Lat.Aug. 16. Meridian sets—Images separating Rising  $102^{\circ} 55' 16''$ Result deduced ..  $24^{\circ} 41' 23''$  S. Lat.*Mouth of the Limpopo.*

Sept. 5, 1868.—Reduction to Meridian. Back observation with sea horizon, from the land, height of eye about 8 feet.

Error of watch 40'.

Nearest Limb of Sun to Southern Point.

h.	m.	s.	Altitude of image, overlapping Rising from North	$121^{\circ} 41' 40''$
12	36	35	"	121 39 20
12	39	14	"	121 38 0
12	41	42	"	

Result deduced ..  $25^{\circ} 15' 29''$  S. Lat.

Meridian Altitude—rising, overlapping the horizon North.

 $121^{\circ} 36' 20''$ Result deduced ..  $25^{\circ} 16' 9''$  S. Latitude.By Troughton and Simms' sextant of date 1849, reading off to  $10''$ —large artificial horizon.

## OBSERVATIONS FOR LONGITUDE BY LUNAR DISTANCES.

*Leydenburg.*

June 26 1868.—Sun W. of Moon.

h.	m.	s.	P.M. Altitude of Sun's limb	..	..	$69^{\circ} 6' 0''$
1	38	12	"	Altitude of Moon's centre	..	63 2 0
1	44	27	"	Distance of nearest limb	..	80 26 0
1	51	41	"	"	..	80 27 10
1	53	44	"	"	..	80 27 50
1	55	20	"	Altitude of Moon's centre	..	69 47 30
1	59	59	"	Altitude of Sun's limb	..	61 48 20
2	6	14	"			

For Time.

h.	m.	s.	P.M. Altitude of Sun's limb	..	..	$71^{\circ} 0' 15''$
1	25	12	"	"	..	70 12 10
1	29	55	"	"	..	69 44 30
1	31	0	"	"	..	
			Result deduced	..	$31^{\circ} 31'$	E. Longitude.

*Confluence of the Limpopo and Lipalule.*

August 3, 1868.—Planet Saturn W. of Moon.

h.	m.	s.	Altitude of Saturn	..	..	$115^{\circ} 2' 0''$
8	18	19	Altitude of Moon	..	..	94 6 0
8	24	22	Distance of nearest limb	..	..	76 14 10
8	29	1	"	..	..	76 15 20
8	31	24	"	..	..	76 16 40
8	35	34	"	..	..	101 7 40
8	39	3	Altitude of Moon	..	..	103 13 0
8	43	57	Altitude of Saturn	..	..	

For Time.

h.	'	"		Altitude of Spica Virginis	..	..	°	'	"
8	9	51			..	..	45	26	30
8	12	45		"	..	..	44	10	50
8	14	47		"	..	..	43	4	45

For half the observed Angle.

Images of Moon constantly rising.

*Confluence of the Limpopo and Lipalule.*August 4, 1868.—*Jupiter E. of Moon.*

h.	'	"		A.M. Altitude of Jupiter	..	..	°	'	"
2	6	50			..	..	121	14	0
2	12	3		"	..	..	107	24	0
2	16	32		"	..	..	44	33	40
2	19	41		"	..	..	44	32	20
2	22	48		"	..	..	44	31	0
2	26	52		"	..	..	100	51	55
2	30	51		"	..	..	123	13	10

For Time.

h.	'	"		Altitude of Jupiter	..	..	°	'	"
2	33	42		"	..	..	123	15	55
2	35	23		"	..	..	123	18	10
2	37	27		"	..	..	123	19	10

*Confluence of the Limpopo and Lipalule.*July 30, 1868.—*Spica Virginis W. of Moon.*

h.	'	"		Altitude of Moon	..	..	°	'	"
10	38	34			..	..	119	21	10
10	42	23		Distance of nearest limb	..	..	28	33	10
10	45	31		"	..	..	28	34	20
10	47	46		"	..	..	28	35	30
10	51	39		Altitude of Moon	..	..	113	33	5

For Time.

h.	'	"		Altitude of Spica Virginis	..	..	°	'	"
8	42	57			..	..	71	8	0
8	45	56		"	..	..	69	25	40
8	49	1		"	..	..	67	54	40

*Confluence of the Limpopo and Lipalule.*August 1, 1868.—*Spica Virginis W. of Moon.*

h.	'	"		Altitude of Spica	..	..	°	'	"
6	54	20			..	..	112	40	40
6	57	40		Altitude of Moon	..	..	70	43	0
7	2	38		Distance of nearest limb	..	..	88	36	30
7	7	29		"	..	..	88	38	0
7	9	5		"	..	..	88	39	10
7	12	38		Altitude of Moon	..	..	77	21	40
7	19	19		Altitude of Spica	..	..	101	37	20

For Time.

h.	'	"		Altitude of Spica	..	..	°	'	"
7	22	59			..	..	99	58	50
7	27	13		"	..	..	98	5	50
7	29	27		"	..	..	96	59	40

August 2, 1868.—For Approximate Longitude.

h.	m.	s.								
11	19	52	Altitude of Moon	..	..	..	..	96	56	"0
11	20	20	"	"	..	..	..	96	54	40
11	22	6	"	"	..	..	..	96	51	20

*Umhamba's Kraal on Bembe River, 12 miles N.W. of Manjobo's Kraal,  
38 miles S.E. of Confluence, probably about long. 34° E., lat. 24° 30' S.*

*Sun E. of Moon.*

h.	m.	s.								
7	49	16	Altitude of Sun's upper limb	..	..	..	..	48	44	25
7	52	25	Altitude of Moon's upper limb	..	..	..	..	79	58	15
7	56	10	Distance of nearest limb	..	..	..	..	80	48	5
7	58	16	"	"	..	..	..	80	37	30
8	0	19	"	"	..	..	..	80	36	0
8	3	14	Altitude of Moon's upper limb	..	..	..	..	76	42	50
8	6	25	Altitude of Moon's upper limb	..	..	..	..	49	18	40

For Time.

h.	m.	s.								
8	15	27	Altitude of Sun's lower limb	..	..	..	..	58	42	30
8	20	41	"	"	..	..	..	60	40	30
8	24	19	"	"	..	..	..	61	58	10

*Umhamba's Kraal.*August 13, 1868.—*Sun E. of Moon.*

h.	m.	s.								
7	34	50	Altitude of Sun's upper limb overlapping rising	..	..	..	..	46	20	20
7	43	0	Altitude of Moon's upper limb separating setting	..	..	..	..	89	23	50
7	47	19	Distance of nearest limb	..	..	..	..	67	53	05
7	50	7	"	"	..	..	..	67	52	45
7	52	53	"	"	..	..	..	67	51	10
8	0	54	Altitude of Moon's upper limb separating setting	..	..	..	..	85	59	10
8	7	25	Altitude of Sun's upper limb overlapping rising	..	..	..	..	57	20	3

For Time.

h.	m.	s.								
8	7	25	Altitude of Sun's upper limb overlapping rising	..	..	..	..	57	20	30
8	9	15	"	"	..	..	..	58	1	10
8	11	45	"	"	..	..	..	59	58	20

*Umhamba's Kraal.*August 13, Second set. *Sun E. of Moon.*

h.	m.	s.								
8	17	53	Altitude of upper limb of Sun overlapping rising	..	..	..	..	61	6	0
8	21	25	Altitude of Moon's upper limb separating setting	..	..	..	..	81	15	10
8	25	19	Distance of nearest limb	..	..	..	..	67	41	20
8	27	50	"	"	..	..	..	67	40	20
8	29	12	"	"	..	..	..	67	39	55
8	33	30	Altitude of Moon's upper limb separating setting	..	..	..	..	78	7	40
8	38	33	Altitude of Sun's upper limb overlapping rising	..	..	..	..	68	39	50

For Time.

h.	m.	s.								
8	41	36	Altitude separating rising	..	..	..	..	68	39	55
8	43	58	"	"	..	..	..	69	29	50
8	45	37	"	"	..	..	..	70	3	5

Instrument, Troughton and Simms' large sextant, reading off to 10"—with artificial horizon with roof.

## OBSERVATIONS FOR VARIATION OF COMPASS.

*Leydenberg, 24° W.**Trigardt's Farm.*

July 12. Mean of 3 observations .. N. 43° 30' East.

Result deduced .. 20° W. nearly.

*On Sorghobiti River. Lat. 23° S., Long. 33° E.*July 20, 1868.—Observed amplitude. Rising E. 1° N.  
" Setting W. 45° 5' N.

Result deduced .. 22° 2' W.

*Confluence of the Limpopo and Lipalule.*

July 30, 1868.—Amplitude at setting W. 43° N.

July 31, 1868.—Amplitude at rising, N. 91° 30' E.

Result deduced .. 22° W.

*Umhamba's Kraal on Bembe River.*Aug. 12, 1868.—8<sup>h</sup>. 20' A.M., Mean of 3 altitudes of Sun, 30° 13' 32"

Compass bearing, N. 74° 30' E.

Instrument, Troughton's pocket prismatic compass.

XII.—*On the Physical Geography and Natural Resources of Epirus.* By MAJOR R. STUART, H.M. Consul at Yanina.

THE province of Epirus is situated on that part of the Eastern shore of the Adriatic where the coast line, deflecting from the general direction of the land, approaches to within 44 statute miles of the back of the heel of Italy, with which it forms the gates, as it were, of the Adriatic. It lies between 38° 56' and 41° 6' N. latitude, and 19° 16' and 21° 35' E. longitude, being 158 miles long from N.W. to S.E.; its greatest breadth is 65 miles, its least about 50, and its superficial area may be stated at about 8000 square miles. It is bounded on the N. by North Albania, on the E. by Macedonia and a part of Mount Pindus, on the S. by the Gulf of Arta and Greece, and on the W. by the Adriatic and the Canal of Corfu. It has a coast line, including bends and irregularities, of 370 miles, viz., 320 on the seaboard, and 50 on the Gulfs of Prevesa and Arta. From the northern extremity, for a direct distance of about 40 miles, the shore is flat and marshy, with extensive salines; and for about 15 miles the land at the southern end is low and shelving; the intermediate part presents a bold and inhospitable coast, formed chiefly by the abrupt flank of the lowest fall of Mount Pindus, pierced, however, by several bays, which